

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	TOKIWA, et al.
Appl. No.	:	10/530,789
Filed	:	April 8, 2005
For	:	TYROSINASE ACTIVITY CONTROLLING AGENT, PROCESS FOR PRODUCING THE SAME AND EXTERNAL PREPARATION CONTAINING THE SAME
Examiner	:	Unknown
Art Unit No.	:	1646

2<sup>nd</sup> REQUEST FOR CORRECTED FILING RECEIPT

Office of Initial Patent Examination  
Customer Service Center  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Further to our request for corrected filing receipt filed on January 9, 2006 in connection with correction of the Assignee's name, please make a correction on the Title indicated in the filing receipt mailed on November 18, 2005. The correct title is **TYROSINASE ACTIVITY CONTROLLING AGENT, PROCESS FOR PRODUCING THE SAME AND EXTERNAL PREPARATION CONTAINING THE SAME** as indicated in the attached specification. As this error appears to have been made at the U.S. Patent and Trademark Office, we believe no fees to be required. However, should any fees be necessary for this request, please charge them to our deposit Account No. 11-1410.

Enclosed in support of this Request are the following:

(X) A copy of the Official Filing Receipt including inserts need to be corrected.

**Appl. No.** : 10/530,789  
**Filed** : April 8, 2005

- (X) A copy of the first page of specification.
- (X) A copy of Notice of Recordation of Assignment Document issued on August 22, 2006.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: January 25, 2007

By: 

Katsuhiro Arai  
Registration No. 43,315  
Attorney of Record  
Customer No. 20,995  
(949) 760-0404

3347675  
012507



SAEG184.001APCJR  
DEA/ICOM

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUGUST 22, 2006

PTAS

KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614



### UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT SERVICES BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 08/07/2006

REEL/FRAME: 018150/0749  
NUMBER OF PAGES: 5

BRIEF: CORRECTIVE ASSIGNMENT TO ADD SECOND ASSIGNEE PREVIOUSLY OMITTED  
FROM AN ASSIGNMENT RECORDED AT REEL 017267 FRAME 0435.  
DOCKET NUMBER: SAEG184.001APC

ASSIGNOR:  
TOKIWA, YUTAKA

DOC DATE: 03/10/2005

ASSIGNOR:  
KITAGAWA, MASARU

DOC DATE: 03/10/2005

ASSIGNOR:  
YOSHINO, KENJI

DOC DATE: 03/10/2005

ASSIGNOR:  
YANAGIDANI, SHUSAKU

DOC DATE: 03/10/2005

ASSIGNOR:  
RAKU, TAKAO

DOC DATE: 03/10/2005

ASSIGNOR:  
TOTANI, TETSUZO

DOC DATE: 03/10/2005

ASSIGNOR:

SHIMAKAWA, HIROMI

DOC DATE: 03/10/2005

ASSIGNEE:

NATIONAL INSTITUTE OF ADVANCED  
INDUSTRIAL SCIENCE AND  
TECHNOLOGY  
3-1, KASUMIGASEKI 1-CHOME  
CHIYODA-KU  
TOKYO 100-8921, JAPAN

ASSIGNEE:

TOYO BOSEKI KABUSHIKI KAISHA  
2-8, DOJIMA HAMA 2-CHOME  
KITA-KU, OSAKA-SHI  
OSAKA 530-8230, JAPAN

SERIAL NUMBER: 10530789

PATENT NUMBER:

TITLE: TYROSINASE ACTIVITY CONTROLLING AGENT, PROCESS FOR PRODUCING THE  
SAME AND EXTERNAL PREPARATIONS CONTAINING THE SAME

FILING DATE: 04/08/2005

ISSUE DATE:

↓  
↓  
↓  
PREPARATION

PAULA MCCRAY, EXAMINER  
ASSIGNMENT SERVICES BRANCH  
PUBLIC RECORDS DIVISION

-1-

## DESCRIPTION

TYROSINASE ACTIVITY CONTROLLING AGENT, PROCESS FOR PRODUCING THE  
SAME AND EXTERNAL PREPARATION CONTAINING THE SAME

5

TECHNICAL FIELD

The present invention relates to a tyrosinase activity  
controlling agent comprising, as an active ingredient, a compound  
that has tyrosinase inhibiting or promoting activity; and to an  
external preparation comprising the controlling agent. The  
10 present invention further relates to a process for producing the  
compound.

Specifically, the present invention relates to a novel  
arbutin ester compound with tyrosinase inhibitory activity, a  
tyrosinase inhibitor comprising the compound as an active  
15 ingredient, and to an external preparation comprising the  
inhibitor. Further, the present invention relates to a tyrosinase  
inhibitor comprising undecylenic acid, a salt thereof or an ester  
derivative thereof as an active ingredient, and to an external  
preparation comprising the inhibitor. Furthermore, the present  
20 invention relates to a tyrosinase activity promoter comprising  
ascorbic acid or a derivative thereof as an active ingredient,  
and to an external preparation comprising the tyrosinase activity  
promoter. The present invention also relates to a process for  
producing an ester using an enzyme, the process being suitable  
25 for production of the tyrosinase inhibitor or promoter.

BACKGROUND ART

Among compounds with tyrosinase inhibitory activity,  
natural products, such as arbutin and kojic acid, are often used  
30 as whitening agents in the cosmetic and other fields (e.g.,  
Journal of the Pharmaceutical Society of Japan, 112 (4), pp. 276-  
282, 1992; Journal of the Pharmaceutical Society of Japan, 115  
(8), pp. 626-632, 1995; BIO INDUSTRY, 11 (4), 206, 1994; and  
Biosci. Biotech. Biochem., 61, 11, pp. 1926-1928, 1997). However,  
35 when used as external preparations for the skin, such as